



# PRIMARY EXAMINATION

## PAST PAPERS & SAMPLE MCQs

**MARCH 2010**

The past papers comprise sample multiple choice questions, essay and short answer written questions from 1985 to 1/1996 (included for your general information), and the viva topics from 1995 onwards.



**PRIMARY EXAMINATION**

**SAMPLE**

**MULTIPLE CHOICE QUESTIONS**

---

The multiple choice questions are type A questions: one best response from five distracters.

The answers to the questions may be found on the page 5.

Each of the questions consists of an incomplete statement or question followed by 5 suggested completions or answers. For each question select the **one** completion or answer which is most appropriate and blacken the circle corresponding (A,B,C,D,E) opposite the question number on the sample answer sheet provided (page 4).

Select the completion or answer which is most appropriate and blacken the circle corresponding (A,B,C,D,E) opposite the question number on the answer sheet.

1.1 Kupffer cells

- A. are found in the spleen
- B. are haemopoietic
- C. form a lining for liver sinusoids
- D. are found in intestinal crypts
- E. have none of the above properties

1.2 The first part of the duodenum

- A. runs posteriorly and inferiorly from the pylorus
- B. lies opposite the twelfth thoracic vertebra in the recumbent position
- C. is completely invested by peritoneum
- D. lies anterior to the hilum of the right kidney
- E. in part of its course is in contact with the anterior surface of the inferior vena cava

1.3 The fifth lumbar nerve

- A. is distributed to the skin of the great toe
- B. is distributed to the flexors of the hip
- C. supplies the skin over the buttock via its dorsal ramus
- D. contributes to the obturator nerve via the dorsal division of its ventral ramus
- E. has none of the above properties

1.4 When CO<sub>2</sub> diffuses into blood in the systemic capillaries most of it

- A. remains in solution as CO<sub>2</sub>
- B. is converted into carbamino compounds
- C. is converted to bicarbonate ions in the red blood corpuscles
- D. combines with haemoglobin directly
- E. combines with water in the plasma to form carbonic acid

1.5 The principal action of cholecystokinin is

- A. to increase the rate of secretion of bile by the liver
- B. to activate the bile salts
- C. to contract the sphincter of Oddi
- D. to inhibit gastric secretion and motility
- E. to make the gall bladder contract

1.6 In the kidney most of the filtered sodium is reabsorbed in the

- A. proximal convoluted tubule
- B. descending limb of loop of Henle
- C. ascending limb of loop of Henle
- D. distal convoluted tubule
- E. collecting duct

---

Select the completion or answer which is most appropriate and blacken the circle corresponding (A,B,C,D,E) opposite the question number on the answer sheet.

1.7 Which of the following statements is true of sodium ion and water absorption from the gut

- A. water and sodium are both passively absorbed from the gut lumen
- B. sodium transport is an active process involving a "carrier", while water is absorbed by diffusion
- C. water transport is an active process and sodium is carried passively during water re-absorption
- D. both water and sodium are actively transported by a "carrier" mechanism
- E. none of the above is true

1.8 Bony metastases least often originate from carcinoma of

- A. breast
- B. prostate
- C. testis
- D. thyroid
- E. kidney

1.9 The effects of exotoxin are the main cause of symptoms in

- A. viral hepatitis
- B. tuberculosis
- C. secondary syphilis
- D. tetanus
- E. subacute bacterial endocarditis

1.10 Platinum wire needles are most conveniently sterilised by

- A. heating to a dull red in a Bunsen burner flame
- B. autoclaving
- C. dry heat
- D. intermittent sterilisation
- E. alcohol

1.11 The autoclave method of sterilisation

- A. usually raises the temperature to approximately 120°C
- B. is performed under atmospheric pressure
- C. differs in theory from a pressure cooker
- E. utilises dry heat
- E. does none of the above



**CORRECT RESPONSE**

<b>QUESTIONS</b>	<b>1.1</b>	<b>C</b>
	<b>1.2</b>	<b>E</b>
	<b>1.3</b>	<b>A</b>
	<b>1.4</b>	<b>C</b>
	<b>1.5</b>	<b>E</b>
	<b>1.6</b>	<b>A</b>
	<b>1.7</b>	<b>B</b>
	<b>1.8</b>	<b>C</b>
	<b>1.9</b>	<b>D</b>
	<b>1.10</b>	<b>A</b>
	<b>1.11</b>	<b>A</b>

# PRIMARY EXAMINATION

## VIVA EXAMINATION

### TOPICS

### ANATOMY

#### APRIL 1995

1. Specimen: Head, Neck & Torso
  - Face/temporal region
  - Triangles of the neck
2. Upper limb - Wrist and hand
3. Lower limb - Relations of structures surrounding the ankle joint
4. X-ray - Chest
5. Bones - Typical lumbar vertebrae
  - Radius
  - Clavicle
  - Femur

Supplementary topic - Cubital fossa

#### OCTOBER 1995

1. Specimen - Head and Neck
  - Larynx - plastic model and wet specimen (sagittal section demonstrating lateral aspect larynx and superficial neck muscles)
2. Lower limb - Knee joint: wet specimen and plastic model
3. Bones – Humerus
- 4/5. X-ray Foot (for both sessions)
6. Bones Base of Skull
7. Specimens - Upper limb - wet specimen demonstrating forearm muscles with tendons cut at flexor retinaculum (also views structures at wrist and superficial palmar muscles)
8. Retroperitoneum - view of kidneys and ureters. Also plastic specimen of kidneys.

#### APRIL 1996

1. Extensor aspect of the hand including finger extensor mechanism (dissection)
2. Muscles of anterior thoracic wall and anatomy of an intercostal space. (dissection)
3. Pelvis (Bone)
4. Cervical spine X-ray
5. Cervical Spine X-ray
6. Hip Joint (dissection)
7. Tibia (bone)
8. Palmar aspect of hand (dissection)

Supplementary topic - Arch of aorta and its relations (dissection)

#### OCTOBER 1996

##### Group 1

1. XRay: Plain abdominal XRay
2. Bone: Lumbar Vertebra
3. Dissections:
  - Cubital Fossa

- Superficial dissection of muscles of face and facial nerve
- (focussing on facial nerve)
- Ankle joint

##### Group 2

1. X-Ray: Pelvis
  - Bone: Articulated carpus - Dissections:
    - Arch of aorta
    - Femoral triangle
    - carotid sheath - including vessels and relations
    -

#### APRIL 1997

##### Group 1

1. X-rays: Elbow
2. Bones: Articulated foot (Metacarpus)
3. Specimens
  - Heart
  - Acromioclavicular and coraco clavicular joints
  - Anterior compartment of the thigh (adductor canal)
  - Sciatic nerve and relationships

##### Group 2

1. X-rays: Carpal bones
2. Bones: Rib
3. Specimens
  - Lung
  - Shoulder joint
  - Posterior compartment of leg
  - Axilla (Brachial Plexus)

#### OCTOBER 1997

##### Group 1

1. X-ray: Facial view
2. Bone: 2nd cervical vertebra
3. Specimens
  - Upper limb: volar aspect, forearm and wrist
  - Lower limb: knee joint
  - Other: upper abdomen, especially liver

##### Group 2

1. X-ray: cervical spine
2. Bone: mandible
3. Specimens
  - Upper limb: extensor aspect, forearm and wrist
  - Lower limb: ankle joint
  - Other: upper abdomen, especially liver

**APRIL 1998**

## Group 1

1. X-ray: Chest
2. Bone: Pelvis
3. Specimens: (wet or plastic)
  - Upper limb - hand (especially palmar aspect of fingers), including flexor tendons
  - Lower limb - popliteal fossa
  - Other - upper airway (especially tongue, palate, pharynx)

## Group 2

1. X-ray: Skull
2. Bone: Scapula
3. Specimens:
  - Upper limb - hand (especially thumb)
  - Lower limb - inguinal ligament
  - Other - larynx

**OCTOBER 1998**

## Group 1

1. Bone: Femur, especially proximal end
2. X-ray: Pelvis, especially lumbosacral spine
3. Upper limb dissection: Shoulder, especially joint stability
4. Lower limb dissection: Ankle, especially anterior aspect
5. Other dissection: Abdomen, kidney and ureter
6. Other dissection: Facial nerve

## Group 2

1. Bone: Humerus, especially proximal end
2. X-ray: Pelvis, especially hip joint and pubis
3. Upper limb dissection: Cubital fossa
4. Lower limb dissection: Dorsum of foot
5. Other dissection: Abdomen, abdominal aorta especially branches and distribution
6. Other dissection: Facial nerve

## Group 3

1. Bone: Lumbar vertebrae, especially articulation
2. X-ray: Shoulder joint, especially stability
3. Upper limb dissection: Volar aspect wrist and carpal tunnel
4. Lower limb dissection: Hip joint, especially blood supply & relations
5. Other dissection: Abdomen, spleen
6. Other dissection: Facial nerve

**APRIL 1999**

## Group 1

1. X-Ray: CXR – esp. cardiac silhouette
2. Bones: Pelvis – esp inguinal ligaments and relations
3. Upper Limb: Elbow joint – esp. joint stability
4. Lower limb: Peroneal compartment of leg – esp. neurovascular
5. Other: Sensory supply of face
6. Supplementary: Surface anatomy of carpal tunnel

## Group 2

1. X-Ray: AXR – esp. renal tract
2. Bones: Pelvis – esp. hip joint and associated ligaments
3. Upper Limb: Axilla - esp. brachial plexus

4. Lower limb: Anterior compartment of leg – esp. neurovascular
5. Other: Blood supply of face
6. Supplementary: Surface anatomy of carpal tunnel

**OCTOBER 1999**

## Group 1

1. X-ray: Carpal bones and scaphoid
2. Bone: C2, axis and ligaments
3. Upper limb: Venous drainage upper limb (surface)
4. Lower limb: Tendons at ankle, especially extensor
5. Other: Larynx, especially intrinsic muscles

## Group 2

1. X-ray: Foot and midtarsal joint
2. Bone: Typical cervical vertebra (C6)
3. Upper limb: Thumb, especially movement
4. Lower limb: Myotomes and reflexes, leg (surface)
5. Other: Anterior triangle of neck, especially carotid

## Group 3

1. X-ray: Lateral cervical spine – stability
2. Bone: Mandible
3. Upper limb: Palm hand
4. Lower limb: Popliteal fossa
5. Other: Surface markings of lungs & pleura

**APRIL 2000**

## Group 1

1. Knee (X-ray)
  - i) General features
  - ii) Ligamentous stability including origin and insertion
2. Radius (bone)
  - i) General features
  - ii) Extensor tendons at wrist
1. Upper limb (model)
  - i) Mechanics of pronation and supination, including muscles and nerves involved
4. Lateral face and neck
  - i) Sensory supply of head and neck (photo)
  - ii) Sensory supply of external ear
5. Femoral triangle
  - i) boundaries and content - (photo)

## Group 2

1. Face (X-ray)
  - i) Identify bones of face
  - ii) Discuss infraorbital nerve
2. Ulna (bone)
  - i) General features
3. Upper limb (model)
  - i) Discuss biceps muscle including action and nerve supply
  - ii) Discuss extension of forearm
3. Thoracic inlet
  - i) Describe major structures - (photo)
4. Knee
  - i) Discuss stability of joint - (function model)

**SEPTEMBER 2000**

## Group 1

1. Cervical Spine (X-ray): discuss flexion/extension and rotation of head
2. Ulna (bone & functional model): discuss proximal end and stability
3. Leg (model) discuss muscles and nerves involved in flexion/extension of foot
4. Axilla (photograph) - discuss median nerve
5. What are the "muscles of mastication" (Discussion)

## Group 2

1. Chest X-ray (X-ray) - discuss non-bony features including cardiac silhouette
2. C<sub>1</sub> & C<sub>2</sub>: discuss movement and stability of joint
3. Leg (model): discuss muscles and nerves involved in inversion / eversion of foot
4. Abdomen: ureter and relations (photograph)
5. Discuss sensation of @ ring finger. (Discussion).

## Group 3

1. Abdomen (X-ray):
  - i) position of solid organs
  - ii) course of ureters
2. Thoracic vertebra: stability and movement - (bone)
3. Leg (model) muscles, nerves and blood supply of calf
4. Axilla (photograph) - discuss boundaries and contents
5. Face (photograph) - blood supply

**APRIL 2001**

## Group 1

1. Ankle X-ray: Discuss ligamentous stability and attachments
2. Elbow joint model: Discuss bony features and flexion and extension
3. Arm model: Discuss flexion of middle finger at MCP, PIP & DIP joints. Discuss nerve supply of muscles involved
4. Heart model - Discuss blood supply
5. Femoral triangle photograph - Discuss origin and distribution of femoral nerve

## Group 2

1. Foot X-ray: Bony landmarks and discuss stability of arch
2. Lumbar vertebra: Bony features
3. Arm model: Muscles and nerves involved in shoulder movement
4. Neck model: Muscles, blood supply, nerves and lymph drainage of tongue
5. Femoral triangle photograph: Discuss origin and distribution of femoral artery

**AUGUST 2001**

## Group 1

1. Lateral face X-ray  
Discuss features of the mandible.
2. Shoulder joint (bone)  
Discuss stability especially rotator cuff
3. Lower limb (model)

Popliteal fossa

4. Thoracic inlet (photo)  
Venous drainage of head and upper limb
5. Upper limb (discussion)  
Peripheral nerves involvement in thumb movement

## Group 2

1. AP face X-ray - Discuss features of zygomatic bone
2. Shoulder joint (bone) - Discuss involvement and nerves involved
3. Lower limb (model) - Posterior compartment of leg
4. Thoracic inlet (photo) - Arterial supply of head and upper limb
5. Face (discussion) - Discuss extraocular muscles and eye movement

**APRIL 2002**

## Group 1

1. Ankle X-ray - Discuss ligamentous stability and attachments.
2. Elbow joint model - Discuss bony features and flexion and extension.
3. Arm model - Discuss flexion of middle finger at MCP, PIP & DIP joints. Discuss nerve supply of muscles involved.
4. Heart model - Discuss blood supply.
5. Femoral triangle photograph - Discuss origin and distribution of femoral nerve.

## Group 2

1. Foot X-ray - Bony landmarks and discuss stability of arch.
2. Lumbar vertebra - Bony features.
3. Arm model - Muscles and nerves involved in shoulder movement.
4. Neck model - Muscles, blood supply, nerves and lymph drainage of tongue.
5. Femoral triangle photograph - Discuss origin and distribution of femoral artery.

**SEPTEMBER 2002**

## Group 1

1. X-ray - cervical spine PEG view
2. Surface markings of carpal tunnel - Discussion
3. Bone - clavicle
4. Model - heart - Blood supply
5. Photographs - back of right thigh

## Group 2

1. X-ray -cervical spine lateral view
2. Sensory innervation of foot - Discussion
3. Bone - pelvis
4. Model - shoulder joint - Discuss muscle groups involved in movement of shoulder joint and nerves involved
5. Photograph: posterior abdominal wall - Course, relationships and branches of abdominal aorta

## Group 3

1. X-ray - chest
2. Sensory innervation of hand - Discussion
3. Bone - radius
4. Model - larynx - Cartilages and intrinsic muscles
5. Photograph: brachial plexus and axilla

**APRIL 2003**

## Group 1

1. X-ray - Chest
2. Surface markings dorsum wrist – Discussion
3. Bone - Humerus
4. Model – Ankle - Bone landmarks and nerves
5. Spinal cord/ vertebral column – layers passed through during lumbar puncture - Discussion

## Group 2

1. X-ray - knee
2. Describe Venous drainage upper limb - Discussion
3. Bone - Ulna
4. Photo - post abdominal wall – urinary tract
5. Photo - face – sensory innervation

**SEPTEMBER 2003**

## Group 1

1. X-ray: Elbow -Capsular and ligamentous attachments
2. Model: Hip joint - Stability and movements
3. Bone: C1 and C2 - Stability and bony features
4. Photo: Posterior abdominal wall - Vasculature
5. Hand – vascular supply - Discuss (acceptable to use candidate's hand)

## Group 2

1. X-ray: Ankle - Capsular and ligamentous stability
2. Model: Elbow joint - Mechanics of pronation and supination. Muscles involved and innervation
3. Bone: Lumbar vertebrae - Stability and bony features
4. Photo: Thoracic inlet - Venous drainage of head and upper limbs and relations
5. Hand - Movements of intrinsic hand muscles and innervation (candidate's hand)

## Group 3

1. X-ray: Hand and wrist - identify bones and ligamentous attachments
2. Model: Knee joint - (Functional model). Movements and locking
3. Bone: Thoracic vertebrae - Stability and bony features. Rib articulations
4. Photo: Lateral face and neck - Muscles and innervation
5. Ankle and foot - Discuss Sensation: peripheral nerve and dermatone

**APRIL 2004**

## Group 1

1. X-ray: Abdomen - Landmarks and course of the abdominal aorta
2. Model: Shoulder joint - Muscles of the pectoral girdle: insertion and action
3. Bone: Radius
4. Photo: Lateral face - Distribution and relations of facial nerve
5. Lower limb: Venous drainage

## Group 2

1. X-ray: Pelvis - Bony landmarks and course of the ureters
2. Model: Heart - Structure and blood supply
3. Bone: Clavicle
4. Photo: Thigh - Back of right thigh. Course of sciatic nerve
5. Wrist - Anterior wrist. Surface markings

**SEPTEMBER 2004**

## Group 1

1. Model: Larynx - Structure and comparative adult and child
2. X-ray: Carpal bones and scaphoid - Boundaries of ASB on candidates hand
3. Bone: Typical rib thoracic vertebrae - Landmarks and structures within intercostal and space
4. Discussion: Ankle -Location of saphenous vein and relations of structures around the ankle
5. Photo: Axilla - Brachial plexus

## Group 2

1. Model: Heart - Great vessels, branches and role of ductus arteriosus in newborn
2. X-ray: Knee - Ligamentous stability
3. Bone: Skull - Facial bones and infraorbital nerve
4. Discussion - Dermatomes of upper limb and radial nerve lesion
5. Photo: Femoral triangle - Relations and distribution of femoral nerve

## Group 3

1. Model: Knee - Extension and patella stability
2. X-ray: Elbow - Bony features, vascular relationships and order of ossification
3. Bone: Typical cervical vertebrae - Articulation
4. Discussion Myotomes of lower limb and lesion of common peroneal nerve
5. Photo: Thoracic inlet - Arterial supply to head

**APRIL 2005**

## Group 1

1. Model: Eye - Movements and CN palsies
2. X-ray: Cervical spine - Normal anatomical structures that stabilise
3. Bone: Femur - Head and neck including blood supply
4. Photo: Posterior abdominal wall- Venous drainage and relations
5. Discussion - Flexion of middle finger at DIP, PIP and MCP, tendons and innervation

## Group 2

1. Model: Eye - Eye structure and control of pupil/reflexes
2. X-ray: Chest - General description. Pleura and lung surface markings
3. Bone: Articulated hand - Carpus bones and positions/relations of flexor retinaculum
4. Photo: Neck - Anterior triangle and sternomastoid relationships
5. Discussion - Sensation of great toe peripheral and nerve root. Myotomes for same segment

## Group 3

1. Model: Larynx - Mandible. Movements/TMJ/muscle attachments
2. X-ray: Ankle XR - Bony landmarks and ligaments
3. Bone: Scapula - Muscular attachments/rotator cuff
4. Photo: Face - Sensory innervation
5. Discussion - Movements of thumb

**SEPTEMBER 2005**

## Group 1

1. Model: Cubital fossa -Median nerve relationships and course
2. X-ray: Abdomen - General description. Bowel and other soft tissue structures
3. Bone: 1st rib - Relationships of nerves and vessels
4. Photo: Face - Course, distribution and relationships of facial nerve
5. Discussion - Knee model - Ligaments and stability

## Group 2

1. Model: Femoral triangle - Fem artery relationships and course
2. X-ray: AP Face - Bones that form the orbit. Infra-orbital nerve distribution
3. Bone: 2 Lumbar vertebrae - Bony features, articulation and movements
4. Photo: Neck/thoracic inlet - Relationships of internal jugular vein
5. Discussion - Position and distribution of median nerve distal to the elbow

## Group 3

1. Model: Heart - Chambers and valves
2. X-ray: Hand and wrist - Identify bones and describe ligaments of the carpus and wrist
3. Bone: Pelvis - Landmarks. Relationships of greater sciatic notch/sciatic nerve
4. Photo: Post abdominal wall - Position and relationships of ureters
5. Discussion - Posterior compartment of the leg. Attachments of Achilles tendon

**APRIL 2006**

## Group 1

1. X-ray: Ankle - Stability and ligaments
2. Bone: Ulna and humerus -Landmarks and articulation of elbow
3. Model: Eye - Structures and drainage of aqueous humour
4. Photo: Femoral triangle - Position of femoral artery
5. Discussion - Spinal column and layers passed through for LP

## Group 2

1. X-ray: PEG view - Landmarks
2. Bone: Femur and tibia - Articulation and ligaments knee
3. Model: Arm - Cubital fossa. Boundaries and contents
4. Photo: Back of thigh - Sciatic nerve

5. Discussion - Chest wall-insertion of ICC landmarks

## Group 3

1. X-ray: Knee - Landmarks and capsular attachments
2. Bone: Humerus - Common fracture sites and position of nerves relative to these (SN, radial groove and supracondylar)
3. Model: Heart - Coronary arteries and blood supply of conduction system
4. Photo: Face - Sensory distribution
5. Discussion - Lower limb myotomes and femoral nerve.

**SEPTEMBER 2006**

## Group 1

1. Bone: Foot - Attachments of the ligaments of the ankle and factors that contribute to ankle stability
2. Model: Arm - Forearm flexors. Distal insertions
3. Photo: Thoracic inlet – Arteries
4. X-ray: Abdo CT - Relations of the spleen
5. Discussion - The intracranial innervation and the terminal branches of the facial nerve

## Group 2

1. Bone: Foot - Tendon insertions of the muscles of the posterior and lateral compartments of the lower leg
2. Model: Eye - Eye structure and control of papillary reflexes
3. Photo: Side of neck - Relations and branches of carotid arteries
4. X-ray: Abdo CT - Relations of the liver
5. Discussion - Describe the flexor retinaculum and the structures bound by it

## Group 3

1. Bone: Scapula and Origins, insertions and actions Humerus of the rotator cuff muscles
2. Model: Knee - Patella stability and quadriceps
3. Photo: Post abdo and Abdominal aorta and iliac arteries pelvic walls
4. X-ray: AP Face - Boundaries of the orbit and distribution of the infraorbital nerve
5. Discussion - Describe the branches of circle of Willis and areas supplied

**MARCH 2007**

## Group 1

1. X-ray: Abdomen - Landmarks of solid organs and ureters. Lymphatic drainage of the male genitalia
2. Bone: Thoracic vertebrae - Bony relations. Factors contributing to stability. Rib articulations and joints
3. Model: Heart - Identify chambers. Outline the blood supply
4. Photo: Gluteal region - Siatic nerve - relationship to piriformis, course and distribution in the lower limb
5. Discussion: Surface anatomy, dorsum of the hand and wrist - Extensor retinaculum and the structures that run under it and Boundaries and contents of the snuff box

## Group 2

1. X-ray: Chest - Mediastinal contours. Attachments and openings of the diaphragm and structures passing through
2. Bone: Lumbar vertebrae - Bony landmarks and factors contributing to stability. List the soft tissue layers passed through for a lumbar puncture
3. Model: Forearm - Median nerve, course and distribution in the forearm
4. Photo: Neck - Boundaries and contents of the anterior triangle. Facial vein and venous drainage of the face
5. Discussion: Lower limb - Discuss the sensory innervation of the lower limb, both peripheral nerves and dermatomes

## Group 3

1. X-ray: Lateral neck - Soft tissue landmarks of pharynx, larynx and oesophagus. Relationships of anterior cartilage structures to cervical levels
2. Bone: First rib - Muscle attachments and neurovascular relations. List the layers passed through for a needle thoracostomy
3. Model: Ankle - Bony structures. Neurovascular relations of the medial malleolus
4. Photo: Abdomen - Left kidney. Relations and blood supply
5. Discussion: Arm - Radial nerve – surface markings, course and branches in the upper arm

**SEPTEMBER 2007**

## Group 1

1. X-ray: CT Head - Describe the visible intracranial structures. Area and functions supplied by the middle cerebral artery
2. Bone: Femur & Acetabulum - Describe the bony features of the femur. The articulation of the hip joint and the factors that increase stability of the hip
3. Model: Eye - Extraocular muscles and their innervation
4. Photo: Thorax - Vascular structures - Thoracic aorta and its branches and area of supply
5. Discussion - The sensory innervation of the upper limb, including both dermatomal distribution and peripheral nerves

## Group 2

1. X-ray: CT Head - Describe the visible intracranial structures. Trace the ventricular system of the brain.
2. Bone: C1 and C2 - Bony features, ligament attachments and movements.
3. Model: Ankle - Describe the bony structures. Attachments of the superior and inferior extensor retinaculum and the structures passing below them.
4. Photo: Abdomen - Vascular structures. Abdominal aorta, branches and supply
5. Discussion - Describe the structure of the brachial plexus. The muscle groups supplied by the terminal branches of the brachial plexus to the upper limb.

## Group 3

1. X-ray: Lateral C spine - Bony structures and lines of alignment. Components of the soft tissue shadow. Location of retropharyngeal space.
2. Bone: Humerus & Scapula - Describe the bony feature of the proximal humerus. The capsular attachments, ligament and movements of the glenohumeral joint
3. Model: Ankle - Outline the bony features. Neurovascular structures that pass over and around the ankle joint
4. Photo: Pelvis - Vagina, cervix and uterus. Peritoneal folds and potential spaces for fluid collection.
5. Discussion - The secretion, circulation and absorption of cerebrospinal fluid

**APRIL 2008**

## Group 1

1. Bone: Hand - Carpel bones - Flexor retinaculum
2. Model: Larynx - Muscles of vocalization - Nerve supply
3. Photo: Femoral triangle - Boundaries and contents
4. X-ray: AP Pelvis – Bones - Muscle attachments of movers of the hip
5. Discussion: Chest Wall - Muscle layers - Course and relationships of the neurovascular bundle

## Group 2

1. Bone: Foot - Tarsal bones - Relations of the medial malleolus
2. Model: Tongue – Muscles - Nerve supply
3. Photo: Posterior Abdominal wall - Major structures - Ureter course and narrowings
4. X-ray: AP Pelvis – Bones - Ligaments of the hip joint
5. Discussion: Cubital fossa - Surface anatomy of boundariesContents

## Group 3

1. Bone: Mandible - Bony features - TMJ articulations - Attachments of muscles of mastication
2. Model: Heart – Chambers - Arterial and venous drainage
3. Photo: Median nerve - Identify and trace course - Structures supplied distally
4. X-ray: Knee - Muscles and ligaments - Factors contributing to stability
5. Discussion: Discuss the blood supply of the gut, outlining the major arteries

**SEPTEMBER 2008**

## Group 1

1. X-ray: Elbow - Bony features of the elbow joint. Extensor muscles of the forearm, origins, common extensor tendon
2. Bone: Tibia - Bony features of the proximal tibia. Meniscal, ligament and capsular attachments of the tibial plateau
3. Model: Larynx – Features. Muscle groups, movements and innervation
4. Photo: Pelvis - Major structures. Bladder and innervation
5. Discussion: Describe the arterial circle of Willis and the areas of the brain supplied

## Group 2

1. X-ray: Abdo CT - Identify the solid and hollow viscera. Peritoneal folds and potential spaces for fluid collection
2. Bone: Tibia and fibula - Proximal tib-fib joint. Relations of the proximal fibula
3. Model: Heart - Identify major chambers. Conducting system of the heart
4. Photo: Neck - Boundaries of anterior and posterior triangles. External carotid artery, branches and supply
5. Discussion: Dermatomes of the upper limb  
Peripheral nerve distribution of the forearm and hand

## Group 3

1. X-Ray: Chest - Mediastinal contours. Surface anatomy of the heart
2. Bone: Skull - Bones of the orbit. Fissures  
Intraorbital (and extraorbital) path of the infraorbital nerve
3. Model: Cubital fossa. Boundaries, contents, relations of the brachial artery
4. Photo: Popliteal fossa - Boundaries and contents. Sciatic nerve, branches and innervations
5. Discussion - Describe the structure and attachments of the diaphragm, its' innervation and contribution to respiration

**APRIL 2009**

## Group 1

1. X-ray: Facial Bones - Bony features and outlines of sinuses
2. Bone: Cervical and lumbar spine - Describe the bony features, highlighting the differences
3. Model: Foot - Name the bones of the medial and longitudinal arches. Factors contributing to stability of the arches
4. Photo: Thoracic inlet - Vascular structures. Branches of the subclavian artery
5. Discussion - Describe the palmar spaces of the hand and their relationship to the long flexor tendons

## Group 2

1. CT brain: Cerebellum - Outline intracranial structures  
Arteries of the posterior circulation and area supplied
2. Bone: Clavicle - Anatomical relations and muscular attachments. Surface anatomy of subclavian vein.
3. Model: Knee - Ligaments, attachments and actions. Bursae, locations and functions.
4. Photo: Posterior abdo wall - Identify the ureters. Course, narrowings, blood supply.
5. Discussion - Describe the lymphatic drainage of the upper limbs.

## Group 3

1. CT Abdo - Identify the structures. Describe the relations of the pancreas
2. Bone: Thoracic spine - Bony features and posterior ligament attachments.

3. Model: Leg - Fibularis muscles. Origins, insertions, actions and nerve supply
4. Photo: Wrist - Structures bound by extensor retinaculum at the wrist
5. Discussion - Surface anatomy of the neck. Define the boundaries of the anterior triangle, outline the thyroid gland and carotid bundle.

**SEPTEMBER 2009**

## Group 1

1. X-ray: AP and Lateral of Ankle - Identify bony structures
2. Bone: Humerus - Bony features and ligaments
3. Model: Orbit - Extraocular muscles and eye movements
4. Photo: Thoracic inlet - Major vessels and relationships
5. Discussion: Anatomy of male urethra

## Group 2

1. X-ray: CT Head - Identify structures
2. Bone: Ankle/foot - Bones and ligamentous attachments
3. Model: Arm - Extensor group of forearm muscles and retinaculum
4. Photo: Aorta/IVC/kidneys - Major vessels, branches and course of Aorta
5. Discussion: LP - Layers penetrated

## Group 3

1. X-Ray: AP and lateral of wrist - Identify bony structures
2. Bone: C2 - Bony features and ligamentous attachments and scapula
3. Model: Femoral triangle - Muscles and contents
4. Photo: Pelvis - Major vessels, course of ureter
5. Discussion - Surface anatomy of the pleura

**MARCH 2010**

## Group 1

1. X-ray: Facial: Name the bones that make up the orbit. The areas supplied by the infra-orbital nerve
2. Bone: Pelvis : Identify the bony landmarks. Describe the attachments of the lateral rotators of the hip
3. Model: Heart: Identify the coronary vessels and their areas of supply
4. Photo: Brachial plexus: Describe its components and location
5. Discussion: Describe the superficial venous drainage of the lower limb

## Group 2

1. X-ray: Facial: Name the bones that make up the orbit. The areas supplied by the infra-orbital nerve.
2. Bone: Pelvis: Identify the bony landmarks. Describe the attachments of the lateral rotators of the hip
3. Model: Heart: Identify the coronary vessels and their areas of supply
4. Photo: Brachial plexus Describe its components and location
5. Discussion: Describe the superficial venous drainage of the lower limb

Group 3

1. X-Ray: CT Abdomen: Identify the structures.  
Describe the relations of the right kidney
2. Bone: Femur: Bony landmarks of the proximal femur. Blood supply of the neck and head of the femur. Capsular attachments.
3. Model: Larynx: Name the structures that make up the larynx. Describe the nerve supply of the larynx
4. Photo: Upper limb: Venous structures and drainage of the upper limb
5. Discussion: Describe the blood supply to the brain

## PATHOLOGY

### APRIL 1995

1. Skin wound healing
  2. Radiation injury
  3. Hypersensitivity
  4. Macrophages
  5. Tetanus
  6. Benign vs malignant neoplasms
  7. Atherosclerosis
  8. Renal calculi
  9. Blood groups
  10. Aneurysms
- Supplementary topic - Clotting cascade

### OCTOBER 1995

1. The normal cell
2. Staphylococcal infections
3. Chemical mediators of acute inflammation
4. Ascites
5. Embolism
6. Thermal burns
7. Host barriers to infection
8. Anaemia

### APRIL 1996

1. Metaplasia/dysplasia
2. Venous thrombosis
3. Streptococcal infections
4. Healing of fractures
5. Role of neutrophils in acute inflammation
6. Types of necrosis
7. Pathophysiology of acute pulmonary oedema
8. Serological changes in hepatitis B infections

### OCTOBER 1996

- Group 1
1. Blood groups
  2. Acute pancreatitis
  3. Cells of the immune system
  4. Acute renal failure
  5. Adult respiratory distress syndrome (ARDS)

#### Group 2

1. Transfusions
2. Chronic pancreatitis
3. Immunopathogenesis of acquired immune deficiency syndrome (AIDS)
4. Hypertensive renal failure
5. Asthma

### APRIL 1997

- Group 1
1. Systemic embolism Sources - Consequences
  2. Cirrhosis - Basic pathological principles  
Pathophysiology of consequences
  3. Restrictive lung diseases  
Basic pathological processes
  4. Hemolytic anaemia - Pathological basis

#### Group 2

1. Thrombosis - Predisposing factors for formation -  
Outcomes of thrombosis
2. Hepatitis B  
Basic pathological process  
Pathological basis of markers  
Clinicopathological syndromes
3. Coad  
Basic pathology of emphysema  
Pathological classifications
4. Leukopaenia  
Pathological causes and immunological  
consequences

### OCTOBER 1997

#### Group 1

1. Jaundice — unconjugated
2. Neoplasia — characteristics of benign tumours
3. Shock — cellular pathology of irreversible shock
4. Cellular injury — tissue necrosis
5. Environmental — patterns of lung injury related to  
air pollution

#### Group 2

1. Microcytic anaemia
2. Hyperthyroidism
3. Shock — pathogenesis of septic shock
4. Cellular injury — atrophy, hypertrophy, hyperplasia,  
metaplasia
5. Environmental — radiation exposure

### APRIL 1998

#### Group 1

1. Tissue healing (skin)
2. Asthma
3. Osteoarthritis
4. Pathogenesis of insulin-dependent diabetes mellitus
5. Cardiogenic shock

#### Group 2

1. Blood groups
2. Chronic inflammation
3. Type I hypersensitivity
4. Embolism (pulmonary)
5. Pancreatitis

### OCTOBER 1998

#### Group 1

1. Serum markers in hepatitis
2. Healing of fractures
3. Infarction
4. Emphysema

#### Group 2

1. Pathogenesis of hepatitis
2. Nerve repair
3. Jaundice
4. Tetanus

## Group 3

1. Abnormalities of immune function in HIV
2. Wound repair
3. Oedema
4. Tuberculosis

Reserved question for all groups: -

5. Thyroiditis

**APRIL 1999**

## Group 1

1. Chemical mediators of inflammation
2. Systemic embolism
3. Pyelonephritis
4. Chronic bronchitis – pathogenesis
5. Transfusion reaction – Type II hypersensitivity

## Group 2

1. Type 1 hypersensitivity
2. AMI – pathogenesis
3. Renal calculi – consequences
4. Haemolytic anaemia
5. Bacterial pneumonia

**OCTOBER 1999**

## Group 1

1. Oedema
2. Atherosclerosis, pathogenesis
3. Type 4 hypersensitivity
4. Staphylococcal infection
5. Coagulation system

## Group 2

1. Reversible ischaemia and necrosis
2. Jaundice
3. Type 3 hypersensitivity
4. Anaerobic bacterial infection
5. Role of platelets in coagulation

## Group 3

1. Haemorrhagic shock-
2. Characteristics of benign and malignant tumours
3. Immunopathogenesis of HIV disease –
4. Bacterial pneumonia
5. Pathogenesis of thrombosis

**APRIL 2000**

## Group 1

1. Pulmonary embolism
2. T cells
3. Microscopic features of atheroma
4. Streptococcal infections
5. Acute tubular necrosis

## Group 2

1. Pathological factors influencing the process of wound healing
2. Pathogenesis of atopic asthma
3. Hepatitis C
4. Myocardial infarction
5. Obstructive Uropathy

**SEPTEMBER 2000**

## Group 1

1. Type 2 Hypersensitivity
2. Bacterial pneumonia

3. Peripheral nerve transection & regeneration
4. Analgesic abuse nephropathy
5. Infective endocarditis
  - pathogenesis
  - clinical consequences

## Group 2

1. T Lymphocytes
2. Pyelonephritis
3. Healing of fractures
4. Jaundice
5. Disseminated intravascular coagulation

## Group 3

1. Type 1 Hypersensitivity
2. Bacterial Meningitis
3. Coagulative versus liquefactive necrosis
4. Emphysema
5. Pathogenetic sequence of events in septic shock -  
(note differences in this topic between 5th & 6th Editions)

**APRIL 2001**

## Group 1

1. Discuss the role of leukocytes in acute inflammation
2. Discuss the HIV virus, and its modes of transmission
3. Discuss acute respiratory distress syndrome
4. Discuss Clostridial wound infections
5. Name the main constituents of tobacco smoke, and their effects on health

## Group 2

1. Discuss the pathogenesis of atherosclerosis –
2. Describe B-cells and their role in immunity –
3. Describe Legionella infections
4. Compare arterial and venous thrombi, including their effects
5. Describe blood transfusion reactions

**AUGUST 2001**

## Group 1

1. Hyperplasia
2. Fracture healing
3. Fulminant Hepatitis – pathogenesis
4. Varicella Zoster infections
5. Essential hypertension

## Group 2

1. Hypertrophy
2. OA vs. RA
3. Hepatitis C – pathogenesis
4. Malaria
5. Atherosclerosis

## Group 3

1. Atrophy / apoptosis
2. Avascular necrosis
3. Chronic viral hepatitis – pathogenesis -
4. Bacterial enteritis
5. AMI – pathogenesis

**APRIL 2002**

## Group 1

1. Discuss the differences between reversible and irreversible cellular injury following acute ischaemia - pp 7-11
2.
  - (a) Describe the healing of skin wounds by secondary intention.
  - (b) How does this differ from primary union?
3.
  - (a) What chemical mediators are involved in Type 1 hypersensitivity reactions?
  - (b) Describe their actions briefly
4. Describe the mechanisms by which viruses cause cell injury
5. Describe the pathogenesis of atopic asthma

## Group 2

1. Discuss the factors involved in the pathogenesis of generalised oedema
2. Describe the role of the Complement system in host defence
3. Describe how bacteria cause cell injury
4. Describe the effects of acute systemic infection by meningococcus
5. Describe the pathological changes in the kidney in acute tubular necrosis

**SEPTEMBER 2002**

## Group 1

1. Fracture healing – pathological processes affecting
2. Pulmonary embolism – pathogenesis
3. Hepatitis B – pathological consequences
4. Bacterial endocarditis – pathogenesis
5. Renal calculi – pathogenesis and consequences

## Group 2

1. Wound repair
2. The role of endothelial cells in thrombosis
3. Hepatitis C – pathogenesis and consequences
4. Bacterial enteritis
5. Acute pancreatitis – pathogenesis -

## Group 3

1. Describe the reversible cellular changes occurring in acute ischaemia.
2. Actions of common mediators of inflammation

3. Alcoholic hepatitis and its consequences
4. Legionnaires disease
5. Cholelithiasis – pathogenesis and consequences 2

**APRIL 2003**

## Group 1

1. Haemorrhagic shock
2. Peripheral nerve repair
3. Atypical pneumonia
4. Role of B cells in immune processes
5. Hypertensive heart disease

## Group 2

1. Oedema
2. Healing of fractures
3. Nonbacterial meningitis
4. Role of complement in immune processes
5. Atherosclerosis

**SEPTEMBER 2003**

## Group 1

1. Describe cellular changes associated with reversible ischaemia
2. Discuss the role of platelets in coagulation
3. Describe the pathogenesis of acute pericarditis
4. Discuss the HIV virus and its modes of transmission
5. Discuss the pathological effects of smoking on the lung

## Group 2

1. Describe the vascular response to acute inflammation
2. Discuss the pathogenesis of Disseminated Intravascular Coagulation
3. Discuss Type III hypersensitivity reactions
4. Describe the pathogenesis of primary tuberculosis
5. Discuss the pathological consequences of heroin use

## Group 3

1. Describe the cellular changes associated with irreversible ischaemia
2. Discuss factors that inhibit the coagulation cascade
3. Describe the pathological consequences of acute myocardial infarction
4. Describe the pathogenesis of Plasmodium falciparum infection
5. Discuss the pathological effects of acute radiation exposure

**APRIL 2004**

## Group 1

1. Wound healing
2. Serum markers in hepatitis B
3. Streptococcal infections
4. ARDS
5. Insulin-dependent diabetes mellitus – Pathogenesis

## Group 2

1. Thrombosis
2. Clostridial wound infections
3. Aortic aneurysms – pathogenesis
4. Asthma – Pathologic features
5. Acute Pancreatitis - Pathologic consequences

**SEPTEMBER 2004**

## Group 1

1. The initial cellular changes in acute ischaemia
2. Healing by first intention
3. Gastroenteritis
4. Aortic dissection
5. Metaplasia

## Group 2

1. What are the biochemical hallmarks of cell injury
2. Mechanism of fibrosis and scar formation
3. Salmonella Enteritis
4. Abdominal aortic aneurysm
5. Metastatic calcification

## Group 3

1. Features and mechanisms of apoptosis
2. Angiogenesis
3. Cholera
4. Calcific aortic stenosis
5. Discuss steatosis (fatty change)

**APRIL 2005**

## Group 1

1. Fracture healing
2. Coagulation cascade
3. Cirrhosis
4. Legionella pneumonia
5. Invasion of extracellular matrix

## Group 2

1. Primary wound repair
2. Thrombosis
3. Acute pancreatitis
4. Mycobacterium tuberculosis
5. Metastasis

## Group 3

1. Scar formation
2. Role of platelets in haemostasis
3. Portal hypertension
4. Influenza
5. Para neoplastic syndrome

**SEPTEMBER 2005**

## Group 1

1. Ischaemic injury
2. Type 3 Hypersensitivity – Immune complex
3. Hepatitis A
4. Crohn's disease
5. Osteoarthritis

## Group 2

1. Reperfusion injury
2. Type 2 Hypersensitivity – Antibody mediated
3. Hepatitis B
4. Ulcerative colitis
5. Rheumatoid arthritis

## Group 3

1. Apoptosis
2. Pathogenesis of septic shock
3. Varicella-zoster
4. Ischaemic bowel disease
5. Gout

**APRIL 2006**

## Group 1

1. Reperfusion injury
2. Pathogenesis of type II DM
3. Atopic asthma
4. Post streptococcal GN
5. Varicella-zoster

## Group 2

1. Reversible vs. irreversible changes of ischaemia
2. Pathogenesis of type I DM
3. Emphysema
4. Cholera
5. Acute tubular necrosis

## Group 3

1. Vascular changes of inflammation
2. Graves disease
3. Hypertrophic cardiomyopathy
4. Urolithiasis
5. Salmonella dysentery

**SEPTEMBER 2006**

## Group 1

1. Thrombosis
2. The role of complement in inflammation
3. Nephrotic syndrome
4. Manifestations of radiation injury –
5. Sequelae of viral hepatitis

## Group 2

1. Reperfusion injury
2. Role of platelets in haemostasis
3. Acute pancreatitis
4. Pernicious anaemia
5. Lead poisoning

## Group 3

1. Apoptosis
2. Coagulation cascade
3. Thiamine deficiency
4. Post streptococcal GN
5. Hepatitis D infection

**MARCH 2007**

## Group 1

1. Hyperplasia
2. Cutaneous wound healing by first intention
3. Herpes simplex
4. Subarachnoid haemorrhage
5. Alcoholic liver disease

## Group 2

1. Atrophy
2. Vascular changes of inflammation
3. Measles
4. Multiple sclerosis
5. Cholecystitis

## Group 3

1. Hypertrophy
2. Oedema formation
3. Meningitis
4. Atopic asthma
5. Aortic dissection

**SEPTEMBER 2007**

## Group 1

1. Metaplasia
2. Hypersensitivity Type 1
3. Myocardial infarction
4. Ruptured berry aneurysms
5. Von Willebrand's Disease

## Group 2

1. Chronic inflammation
2. Hypersensitivity Type 4
3. Emphysema
4. Alzheimer's disease
5. Haemophilia A

## Group 3

1. Fracture healing
2. Atopic asthma
3. Urolithiasis
4. Non-haemorrhagic CVA
5. Pathogenesis of septic shock

**APRIL 2008**

## Group 1

1. Hypertrophy versus Hyperplasia
2. Pathological calcification
3. Hepatitis A
4. Nephrotic syndrome
5. Sickle cell anaemia

## Group 2

1. Apoptosis
2. Angiogenesis
3. Hepatitis C
4. Gout
5. Disseminated Intravascular Coagulation

## Group 3

1. Scar formation
2. Embolism
3. Clostridial infections
4. Peptic ulcer disease
5. Pre-eclampsia

**SEPTEMBER 2008**

## Group 1

1. Ischaemic Injury
2. Type 2 Antibody mediated hypersensitivity
3. Tuberculosis
4. Calcific Aortic stenosis
5. Thyrotoxicosis

## Group 2

1. Role of complement in inflammation
2. Local & systemic influences on wound healing
3. Malaria
4. Pericarditis
5. Pathogenesis of Type I diabetes

## Group 3

1. Cellular changes in inflammation
2. Type 3 Immune mediated hypersensitivity
3. Candidiasis
4. Pathogenesis of atherosclerosis
5. Pituitary adenomas

**APRIL 2009**

## Group 1

1. Vascular changes of inflammation
2. Role of platelets in haemostasis
3. Tumour invasion & metastasis
4. Influenza
5. Hypertrophic cardiomyopathy

## Group 2

1. Cellular changes following ischaemia
2. Pathogenesis of septic shock
3. Hepatitis C
4. Von Willebrand disease
5. Malignant Mesothelioma (pleural)

## Group 3

1. Thrombosis
2. Type 4 – Delayed type hypersensitivity
3. Neisserial infections
4. Vitamin K
5. Crohn disease

**SEPTEMBER 2009**

## Group 1

1. Type 1 Hypersensitivity
2. Chronic inflammation
3. Effects of tumour on the host
4. Streptococcal infections
5. Disseminated intravascular coagulation

## Group 2

1. Wound healing by primary intention
2. Normal haemostasis
3. Diabetes mellitus, Type 1
4. Ischaemic bowel
5. ARDS

## Group 3

1. Reversible versus irreversible cellular injury
2. Host barriers to infection
3. Embolism
4. Acute pancreatitis
5. Multiple sclerosis

**MARCH 2010**

## Group 1

1. Reperfusion injury
2. Apoptosis
3. Emphysema
4. Aortic dissection
5. Acute meningitis

## Group 2

1. Metaplasia
2. Local & Systemic influences on wounds
3. Coagulation cascade
4. Influenza
5. Portal hypertension

Group 3

1. Hypertrophy
2. Oedema formation
3. Type 2 Hypersensitivity – Antibody mediated
4. Hepatitis D
5. Haemolytic anaemia

## PHYSIOLOGY

### APRIL 1995

1. Resting membrane potentials
2. Sensory pathways
3. Plasma composition
4. Autoregulation of blood flow
5. Medical physics of pressure/flow/resistance
6. The cardiac cycle
7. Stability of alveoli
8. Dead space
9. Renal blood flow
10. Buffers

Supplementary topic

Oxygen haemoglobin saturation curve

### OCTOBER 1995

1. Forces producing movement of substances across cell membranes
2. Alveolar gas equation
3. The stretch reflex
4. Factors controlling cardiac output
5. Relationship between muscle fibre length and tension
6. Lung volumes
7. Visual pathway
8. Renin - angiotensin system

### APRIL 1996

1. Ion flux during an action potential
2. Control of ventilation
3. Effect of exercise on the cardiovascular system
4. The renal mechanism for forming dilute urine
5. Sequence of events in contraction/relaxation of skeletal muscle
6. Capillary fluid exchange
7. Effect of posture on pulmonary ventilation and perfusion and therefore the effect of posture on the V/Q ratio
8. Nerve fibre types and function

### OCTOBER 1996

Group 1

1. Body fluid compartments
2. Factors determining blood glucose level
3. Chemoreceptors in the cardiovascular system
4. Carbon dioxide transport
5. Hydrogen ion secretion in the kidney

Group 2

1. Electrolyte composition of the body fluids
2. Carbohydrate homeostasis in exercise
3. Baroreceptors in the cardiovascular system
4. Oxygen transport
5. Regulation of potassium secretion by the kidney

### APRIL 1997

Group 1

1. Discuss the phases of the cardiac cycle
2. Discuss dead space with regard to lung volumes
3. Discuss how fatty acids are metabolised in the cell to produce energy
4. Discuss formation and action of angiotensin

5. Discuss the changes in acid-base status in an acute and a chronic respiratory acidosis
6. Discuss transmission at the neuromuscular junction)

Group 2

1. Discuss the conducting system of the heart
2. Discuss regional differences in ventilation and blood flow in the lung
3. Discuss the metabolism of proteins
4. Discuss the regulation of renin secretion
5. Discuss the changes in acid-base status in an acute and a chronic respiratory alkalosis
6. Discuss the process of skeletal muscle contraction

### OCTOBER 1997

Group 1

1. Effects of insulin on adipose / muscle / liver tissue
2. Medullary control of blood pressure
3. Compliance of lungs and chest wall
4. Glucose reabsorption by the kidney
5. Gastric motility and emptying

Group 2

1. Factors influencing myocardial contractility / Frank Starling curve
2. Alveolar surface tension and surfactant
3. Actions of glucagon
4. Osmotic diuresis
5. Regulation of gastric secretion

### APRIL 1998

Group 1

1. Describe the respiratory and renal compensatory mechanisms that occur with a metabolic acidosis
2. Discuss perfusion-limited diffusion across the alveolocapillary membrane
3. Discuss autoregulation as it applies to the cerebral circulation
4. Describe and discuss the various components of the jugular pulse
5. Describe the effect of noradrenaline on heart rate, TPR, CO and arterial BP
6. Describe the formation and effects of 1,25 dihydrocholecalciferol

Group 2

1. Describe the respiratory and renal compensatory mechanisms that occur with a metabolic alkalosis
2. Discuss coronary blood flow
3. Discuss diffusion-limited diffusion across the alveolocapillary membrane
4. Describe the changes in pressure in the aorta and left ventricle during the cardiac cycle
5. Describe the effect of adrenaline on heart rate, TPR, CO and arterial BP
6. Describe the effects of parathyroid hormone

**OCTOBER 1998**

## Group 1

1. Forces producing movement of substances across cell membranes
2. Sequence of events in contraction and relaxation of visceral smooth muscle
3. Pathways involved in medullary control of blood pressure
4. Effects of exercise on ventilation
5. Describe the fate of filtered glucose in the kidney

## Group 2

1. Transport across cell membranes
2. Action potential and contractile response in cardiac muscle
3. Capillary fluid exchange
4. Neural control of breathing
5. Regulation of sodium excretion in the kidney

## Group 3

1. Resting membrane potentials
2. Sequence of events in contraction and relaxation of skeletal muscle
3. The interactions between the components that regulate cardiac output and arterial pressure
4. The chemical control of breathing
5. Regulation of potassium excretion in the kidney

**APRIL 1999**

## Group 1

1. Law of Laplace in relation to blood vessels and heart
2. Feedback control of glucocorticoid secretion
3. Visual pathway and effect of lesions
4. Pressure changes in inspiration and expiration
5. Pacemaker potentials

## Group 2

1. Laminar flow – Reynolds number
2. Erythropoietin – function, sources and regulation of secretion
3. Sensory pathways in Spinal Cord
4. CO<sub>2</sub> transport
5. Circulation changes in exercise

**OCTOBER 1999**

## Group 1

1. Alveolar gas equation
2. Coronary blood flow
3. Response to infusion of 1 litre of N Saline
4. Cholinergic synaptic transmission
5. Regional differences in ventilation and perfusion

## Group 2

1. Haemoglobin-oxygen dissociation curve
2. Cerebral blood flow
3. The regulation of osmolality
4. Action potential ion fluxes
5. Alveolar stability

## Group 3

1. CO<sub>2</sub> transport
2. Pulmonary circulation

3. Response to isotonic dehydration of 1 litre -
4. Noradrenergic synaptic transmission
5. Gas transfer across capillary

**APRIL 2000**

## Group 1

1. The cardiac cycle
2. The ionic basis of conduction in nerves / types of nerve fibres
3. The effects of altitude on respiration
4. Thyroid gland / thyroid hormone
5. Renal compensation for metabolic acidosis

## Group 2

1. Factors controlling cardiac output
2. The stretch reflex
3. The effects of exercise on respiration
4. Control of plasma glucose
5. Renal compensation for metabolic alkalosis

**SEPTEMBER 2000**

## Group 1

1. Draw a diagram of the action potential of the sinoatrial node of cardiac muscle.
2. Discuss the regional differences in pulmonary blood flow
3. Discuss the physiology of the exocrine pancreas.
4. Discuss the factors involved in calcium metabolism
5. Draw a cross section of the spinal cord showing location of the ascending sensory pathways

## Group 2

1. Draw a diagram of the action potential recorded from the ventricle
2. Discuss the control of ventilation
3. Discuss the renal regulation of Na<sup>+</sup> and Cl<sup>-</sup> excretion
4. Discuss the physiology of gastric secretion -
5. Draw a cross section of the spinal cord showing location of the motor pathways.

## Group 3

1. Describe the neural components involved in arterial pressure regulation
2. Discuss the regional differences in pulmonary ventilation
3. Describe the events during contraction and relaxation of skeletal muscle, and draw a diagram showing the length-tension relationship of skeletal muscle.
4. Discuss the physiology of bilirubin metabolism and bile formation
5. Discuss the physiology of iron

**APRIL 2001**

## Group 1

1. Alveolar gas equation
2. Coronary blood flow
3. Response to infusion of 1 litre of N Saline
4. Electrophysiology of the muscular junction
5. Regional differences in ventilation and perfusion

## Group 2

1. CO<sub>2</sub> transport
2. Cerebral blood flow
3. Response to isotonic dehydration of 1 litre
4. Electrophysiology of the nerve action potential
5. Compliance of the lung and thoracic cage

**AUGUST 2001**

## Group 1

1. Describe the cardiac cycle
2. Discuss the ionic basis of excitation and conduction in nerves, and the classification of nerve fibre types
3. Regional differences in pulmonary blood flow
4. Mineralocorticoid physiology
5. The physiology of protein synthesis

## Group 2

1. Describe the factors controlling cardiac output
2. Describe how a stretch reflex occurs
3. Describe the control of ventilation
4. Glucocorticoid physiology
5. The physiology of intercellular communication

## Group 3

1. Discuss the neural components of arterial blood pressure regulation
2. Describe the events during contraction and relaxation of skeletal muscle, and draw a diagram showing the length-tension relationship of skeletal muscle
3. Regional differences in pulmonary ventilation
4. The physiology of the renin-angiotensin-aldosterone axis
5. The physiology of transport across cell membranes

**APRIL 2002**

## Group 1

1. Action potential of sinoatrial node
2. Alveolar gas equation
3. Renal blood flow regulation
4. Neurophysiology of antidiuretic hormone

## Group 2

1. Action potential of ventricular muscle
2. CO<sub>2</sub> transport
3. Regulation of the cerebral blood flow
4. Bilirubin and bile formation
5. Adrenomedullary hormones

**SEPTEMBER 2002**

## Group 1

1. Describe the cardiac cycle
2. Regional differences in pulmonary blood flow
3. Discuss the regulation of osmolality
4. Describe transmission at a cholinergic synapse
5. Discuss the physiology of the endocrine pancreas

## Group 2

1. Describe the factors controlling cardiac output
2. The control of ventilation
3. Response to infusion of 1 litre of N Saline
4. Describe transmission at an adrenergic synapse
5. Discuss the physiology of the thyroid gland

## Group 3

1. The neural regulation of arterial blood pressure
2. Regional differences in pulmonary ventilation
3. Response to isotonic dehydration of 1 litre
4. Describe the contraction of skeletal muscle after the arrival of a nerve impulse
5. Discuss the physiology of calcium metabolism

**APRIL 2003**

## Group 1

1. Discuss the physiology of transport across cell membranes
2. Describe the factors which affect glomerular filtration rate
3. Discuss the regulation of insulin secretion
4. Describe the action potential of a pacemaker cell
5. Discuss the effect of altitude on respiration

## Group 2

1. Discuss the function of cyclic AMP as an intracellular messenger
2. Discuss the renal regulation of acid excretion
3. Discuss the physiology of the renin-angiotensin system
4. Describe the physiology of conduction along a nerve cell
5. Describe carbon dioxide transport and its dissociation curve

**SEPTEMBER 2003**

## Group 1

1. Digestion and absorption of carbohydrates
2. Neural factors affecting arteriolar tone
3. Factors controlling the synthesis and release of ADH
4. Factors controlling cardiac output
5. Factors that determine work of breathing

## Group 2

1. Digestion and absorption of proteins and nucleic acids
2. Gastric secretions - Ganong 19th ed, pp 470-4, 472 (F)
3. Hormonal factors affecting arteriolar tone
4. Factors controlling the synthesis and release of renin
5. Cardiac cycle
6. Relationship of intrapleural pressure and lung volume and resultant regional differences in ventilation

## Group 3

1. Digestion and absorption of lipids
2. Local factors affecting arteriolar tone
3. Factors controlling the synthesis and release of aldosterone
4. Factors affecting CVP
5. Perfusion and diffusion limited gas exchange

**APRIL 2004**

## Group 1

1. Action potential of a pacemaker cell
2. Physiological basis of a stretch reflex
3. Factors that determine pulmonary blood flow
4. Cardiovascular responses to acute moderate haemorrhage
5. Renal and respiratory response to an acid load

## Group 2

1. Factors controlling cardiac output
2. Nerve cell conduction
3. Draw and label a lung volume curve produced by a spirometer at normal and maximal respiration
4. Renal regulation of Na<sup>+</sup> balance
5. Factors controlling blood glucose level

**SEPTEMBER 2004**

## Group 1

1. Endothelium and the regulation of blood flow
2. Control of ventilation
3. The physiology of noradrenergic neurotransmission
4. The physiology of calcium metabolism
5. The factors in the control of renal blood flow

## Group 2

1. Circulating hormones and the regulation of blood pressure and flow including renin-angiotensin, noradrenaline, vasopressin
2. Anatomical and physiological dead space
3. The physiology of cholinergic neurotransmission
4. The physiology of adrenomedullary hormones
5. The control of osmolality

## Group 3

1. Baroreceptors and the regulation of blood pressure
2. Changes in respiration with exercise
3. The physiology of the neuromuscular function
4. The physiology of iron metabolism
5. The renal regulation of K<sup>+</sup>

**APRIL 2005**

## Group 1

1. Cardiovascular compensation for shock
2. Control of ventilation
3. Renal regulation of Na<sup>+</sup> balance
4. Neuromuscular excitation-contraction coupling
5. Thyroid hormones

## Group 2

1. Cardiovascular compensation for fluid overload
2. Regional differences in pulmonary blood flow
3. Factors affecting GFR
4. Stretch reflex
5. Endocrine regulation of glucose homeostasis - Ganong

## Group 3

1. Cardiac cycle
2. Effect of altitude on respiration
3. Renal regulation of H<sup>+</sup>
4. Nerve action potential
5. Pituitary hormones

**SEPTEMBER 2005**

## Group 1

1. Factors affecting Cerebral Blood Flow
2. Respiratory compensation for acid base changes (Davenport diagram)
3. Principles of intercellular communication
4. Loop of Henle - structure and function
5. Exocrine function of the pancreas

## Group 2

1. Alveolar surface tension and surfactant
2. Renal Blood Flow. Normal value and regulation
3. Action potential in cardiac cells
4. Protein synthesis
5. Regulation of temperature

## Group 3

1. Flow, pressure and resistance relationship and its applicability to flow in blood vessels
2. Metabolic, defence and other non-respiratory functions of the lungs
3. Transport across cell membranes
4. Buffers in body fluids
5. Physiology of glucocorticoids

**APRIL 2006**

## Group 1

1. Factors effecting myocardial contractility (Frank Starling curve)
2. Diffusion across the alveolocapillary membrane
3. Renal sodium and potassium excretion - Ganong
4. Stretch and inverse stretch reflexes - Ganong
5. Calcium metabolism

## Group 2

1. Physiological basis of the ECG
2. Oxygen and Carbon dioxide transport in blood
3. Water excretion by the kidney
4. Insulin- Mechanism and effects
5. Bile, bilirubin metabolism and excretion

## Group 3

1. Regulation of coronary blood flow
2. Airway resistance
3. Discuss glomerular filtration
4. Adrenal medullary hormones
5. Regulation of gastric secretion

**SEPTEMBER 2006**

## Group 1

1. Ventilation/perfusion inequality
2. Changes in cardiac function with exercise
3. Digestion and absorption of protein
4. Cerebral blood flow
5. Physiology of pain

## Group 2

1. Elastic properties of the lung
2. Cardiac muscle cell action potential and spread of excitation
3. Withdrawal reflex (polysynaptic reflexes)

4. Renal blood flow
5. ACTH – response to stress and feedback loops

## Group 3

1. Pulmonary blood flow
2. Baroreceptors of aortic arch and carotid sinus response to change in pressure
3. Neuronal inhibition
4. Renal H<sup>+</sup>/HCO<sub>3</sub><sup>-</sup> excretion
5. Physiology of acetylcholine

**MARCH 2007**

## Group 1

1. Venous return curve and mean systemic filling pressure
2. Elastic properties of the lung
3. Functional anatomy of the nephron
4. Effects of thyroid hormones
5. Reticular activating system

## Group 2

1. Arterial pressure regulation
2. Physiological shunt in the lung
3. Tubular function
4. Smooth muscle contraction
5. Mineralocorticoids

## Group 3

1. Pacemaker potential
2. Sensors in control of ventilation
3. Buffers
4. Body composition
5. Carbohydrate metabolism

**SEPTEMBER 2007**

## Group 1

1. Pulmonary Vascular Resistance
2. Cardiac output, muscle blood flow during exercise
3. Micturition
4. Contractile responses of muscle
5. Catecholamines as neurotransmitters

## Group 2

1. Distribution of pulmonary blood flow in upright human
2. Cardiac cycle
3. Water excretion
4. Nerve excitation and conduction
5. Temperature regulation

## Group 3

1. Effect of high altitude on respiration
2. Action potential in cardiac cells
3. GFR – measurement and factors affecting GFR
4. Chemical transmission of synaptic activity
5. Vestibular function

**APRIL 2008**

## Group 1

1. Ventilation/ Perfusion inequality
2. Renal regulation of K<sup>+</sup>
3. Interrelationship of pressure, flow & resistance

4. Thyroid hormones - Ganong
5. Vitamin D

## Group 2

1. Airway Resistance
2. Renal blood flow
3. Factors controlling cardiac output & O<sub>2</sub> consumption
4. Glucocorticoids
5. Iron

## Group 3

1. Elastic Properties of the Lung
2. Loop of Henle, structure & function
3. Cerebral blood flow. Brain metabolism & O<sub>2</sub> requirements
4. Insulin & Glucose
5. Regulation of calcium

**SEPTEMBER 2008**

## Group 1

1. Action Potential Cardiac Pacemaker Cell and effect of Sympathetic/Parasympathetic stimulus
2. Distribution of Blood flow in Lung
3. Micturition
4. Transport across Cell Membranes including Na-K pump
5. Vasopressin Synthesis/Actions/Stimuli

## Group 2

1. Effects of Hyper and Hypokalaemia on ECG at plasma levels of 2.5/3.5/7.5/8.5 meq/L
2. Carbon Dioxide Transport
3. Renal regulation of K<sup>+</sup> excretion
4. Skeletal Muscle Excitation/Contraction/Relaxation Physiology (Effects and Mechanisms of action) of Insulin

## Group 3

1. Systemic Regulation of Blood Pressure by the Nervous System
2. Control of Ventilation
3. Renal Blood Flow
4. Synthesis and fate of catecholamines at synaptic junction
5. Aldosterone Synthesis/Effects/Feedback Loop

**APRIL 2009**

## Group 1

1. Isovolumetric Contraction/Relaxation
2. Role of Surfactant and applied Laplace's Law
3. Describe how acid is secreted and absorbed in the renal tubular system
4. The physiology of serotonin in the body
5. Temperature regulation

## Group 2

1. Cerebral blood flow and its regulation
2. Carbon Dioxide Transport
3. Counter-Current Mechanism
4. Thyroid hormone synthesis and effects
5. Describe the pain sensory pathway from the periphery to the brain

## Group 3

1. Factors determining myocardial O<sub>2</sub> demand
2. The alveolar gas equation and its use in a clinical setting
3. Renal regulation of Sodium
4. Withdrawal Reflex
5. Regulation of Plasma calcium levels

## Group 3

1. Elastic properties of the lung
2. Coronary circulation
3. Mechanisms of tubular reabsorption and secretion
4. Physiological effects of glucocorticoids
5. Inhibition and facilitation at synapses

**SEPTEMBER 2009**

## Group 1

1. Differences in action potential between cardiac myocyte and pacemaker cells – SA node
2. Pulmonary vascular resistance
3. Describe how acid is secreted and absorbed in the renal tubular system
4. Carbohydrate metabolism - factors affecting plasma glucose level
5. Describe effects of mineralcorticoids, mechanism of action, cells they act on in the kidney, what is typical electrolyte pattern seen in hyperaldosteronism

## Group 2

1. Myocardial contractility and effect of changes on Frank-Starling curve
2. Oxygen transport in the blood
3. Describe how sodium is secreted and absorbed in the renal tubular system
4. Skeletal muscle contraction/relaxation – sequence of events, summation, treppe
5. Describe the effects of parathyroid hormone

## Group 3

1. Cardiac Cycle, relationship between ECG and ventricular volume
2. High altitude and its effect on the respiratory system
3. Describe how water is secreted and absorbed in the renal tubular system
4. What are principle functions of the liver, composition of bile, metabolism and excretion of bilirubin
5. Effect of thyroid hormone - mechanism, effects on cardiovascular, nervous system

**MARCH 2010**

## Group 1

1. Arterial and arteriolar circulation
2. Effects of Insulin
3. Water balance in the lung
4. Catecholamines
5. Renal compensation to acidosis and alkalosis

## Group 2

1. Cardiovascular regulation- Local regulation
2. Ventilation perfusion inequality
3. Ionic basis of excitation and conduction – Resting and Action potential
4. Defense of tonicity-Vasopressin
5. Exocrine pancreas

## PHARMACOLOGY

### APRIL 1995

1. Volume of distribution
  2. Mechanisms of drug antagonism
  3. Beta lactam agents
  4. Beta blockers
  5. Bioavailability of opiates
  6. Suxamethonium
  7. Aspirin
  8. Insulin
  9. Methods of decreasing absorption of toxic agents from GIT
  10. Hepatitis immunisation
- Supplementary topic - Salbutamol

### OCTOBER 1995

1. Half-life
2. Active and passive immunisation
3. Adrenaline
4. Ipratropium bromide
5. Potency and efficacy
6. Macrolide antibiotics
7. Pharmacodynamics of tricyclic antidepressants
8. Sotalol

### APRIL 1996

1. Loading dose
2. Non-depolarising muscle relaxants
3. Adenosine
4. Tetracyclines
5. Reversible/irreversible antagonists and response curves
6. TPA
7. Ace inhibitor - captopril
8. Salbutamol

### OCTOBER 1996

#### Group 1

1. Biotransformation
2. Calcium channel blockers
3. Cephalosporins
4. Atrophine
5. Carbamazepine

#### Group 2

1. Drug receptors
2. Class 1 antiarrhythmic agents
3. Antiviral agents
4. Prednisolone
5. Monoamine oxidase inhibitors

### APRIL 1997

#### Group 1

1. First Pass Effect
2. Dopamine
3. Chlorpromazine
4. Aminoglycosides
5. Colchicine

#### Group 2

1. Clearance
2. Amiodarone
3. Haloperidol
4. Isoniazid
5. Indomethacin

### OCTOBER 1997

#### Group 1

1. Steady State
2. Atropine
3. Warfarin
4. Insulin
5. Acyclovir

#### Group 2

1. Biotransformation
2. Adrenaline
3. Heparin
4. Hydrocortisone
5. Chloramphenicol

### APRIL 1998

#### Group 1

1. Define efficacy and potency.
2. What parenteral agents are available for the management of hypertension in the emergency department? Follow up response on nitroprusside.
3. Compare and contrast the opiates, morphine and pethidine.
4. Which antibiotics can be used in the treatment of acute diverticulitis? Follow up response on metronidazole.
5. Compare and contrast phenytoin and diazepam in the treatment of seizures.

#### Group 2

1. Define the terms receptor agonist and antagonist with examples.
2. Discuss the different classes of calcium channel blocking drugs.
3. Compare and contrast the neuromuscular blocking agents suxamethonium and vecuronium.
4. Which antibiotics are used in the treatment of pelvic inflammatory disease? Follow up response on tetracycline.
5. Discuss the properties of Haloperidol.

### OCTOBER 1998

#### Group 1

1. How do drugs interact with receptors?
2. Which anti-microbial agents act on the cell wall and how do they do so?
3. SSRI's
4. Agents used in the treatment of angina. Follow-up: a beta blocker
5. What drugs should be avoided during pregnancy and breast feeding?

#### Group 2

1. What are secondary messengers and how do they work?
2. Which anti-microbial agents act on protein synthesis and how do they do so?
3. Phenytoin
4. Compare and contrast streptokinase and t-PA
5. How does age influence how the body handles drugs?

## Group 3

1. What factors influence the half life of a drug?
2. Ciprofloxacin
3. Carbamazepine
4. Agents used in the treatment of hypertension.  
Follow-up: ACE inhibitors
5. Compare and contrast ranitidine and omeprazole

**APRIL 1999**

## Group 1

1. What do you understand by the term 'elimination kinetics'?
2. Phenytoin
3. Opioid receptors
4. Aminoglycosides
5.  $\beta$ -blockers

## Group 2

1. Volume of distribution / loading dose
2. Aspirin
3. Calcium channel blockers
4. Macrolide antibiotics
5. Compare and contrast the anti-depressant agents SSRI and TCA

**OCTOBER 1999**

## Group 1

1. Agonist and antagonist activity
2. Heparin (and LMWH)
3. Lignocaine
4. Midazolam
5. Suxamethonium

## Group 2

1. Biotransformation
2. Thrombolytics
3. Adenosine
4. Thiopentone
5. Frusemide

## Group 3

1. Signalling mechanisms
2. Warfarin (and superwarfarins)
3. Amiodarone
4. Propofol
5. Flucloxacillin

**APRIL 2000**

## Group 1

1. The cellular basis of drug action
2. Drugs used in the management of cardiac failure
3. Phenytoin
4. What problems can be encountered when administering drugs in pregnancy? Give examples of mechanisms
5. What are the mechanisms by which antibiotics act?

## Group 2

1. Discuss drug biotransformation
2. Drugs used in the management of ischaemic heart disease syndromes
3. Fentanyl

4. What problems can be encountered when administering drugs to the aged? Give examples of mechanisms
5. What are the mechanisms of antibiotic drug resistance? - Aminoglycosides, Macrolides, Penicillins, Sulphonamid, Trimethoprim, Tetracyclines, Vancomycin

**SEPTEMBER 2000**

## Group 1

1. Elimination kinetics
2. Benzodiazepines
3. Succinylcholine
4. Acyclovir
5. Atenolol

## Group 2

1. Volume of distribution
2. Pethidine
3. Halothane
4. Macrolides
5. ACE inhibitors and angiotensin antagonists

## Group 3

1. Half-life
2. Aspirin
3. Vecuronium
4. Quinolones
5. Heparins

**APRIL 2001**

## Group 1

1. Atropine
2. MAOI
3. Ketamine
4. Salbutamol
5. Oral hypoglycaemics

## Group 2

1. Adrenaline
2. SSRI
3. Propofol
4. Prednisolone
5. Benzotropine

**AUGUST 2001**

## Group 1

1. Define pharmacokinetics - (Discuss in relation to aspirin)
2. Quinolones
3. Thiopentone
4. Paracetamol
5.  $\beta$ -blockers

## Group 2

1. Define volume of distribution. Discuss significance with respect to management of tricyclic antidepressant overdose
2. Sulphonamides
3. Bupivacaine
4. Indocid
5. Nitrates

## Group 3

1. Pharmacokinetic considerations in the elderly patient
2. Gentamicin
3. Nitrous oxide
4. Metoclopramide
5. Verapamil

**APRIL 2002**

## Group 1

1. Agonist and antagonist activity
2. Lignocaine
3. Frusemide
4. H1 receptor antagonists
5. Cephalosporins

## Group 2

1. Elimination kinetics
2. Thiopentone
3. ACE Inhibitors
4. H2 receptor antagonists
5. Sulphonamides

**SEPTEMBER 2002**

## Group 1

1. Elimination of drugs
2. Calcium channel blockers
3. Benzodiazepine toxicity
4. Carbamazepine
5. Cromoglycate

## Group 2

1. Dose-response
2. Glyceryl Trinitrate
3. Chronic alcohol toxicity
4. Lignocaine
5. Methylxanthines

## Group 3

1. Absorption of drugs
2. Atenolol
3. Narcotic toxicity
4. Phenothiazines
5. Ipratropium

**APRIL 2003**

## Group 1

1. Volume of distribution
2. ACE inhibitors
3. Propofol
4. Tetracyclines
5. Oral hypoglycaemic agents

## Group 2

1. Biotransformation
2. Adenosine
3. Succinylcholine
4. Quinolones
5. Heparins

**SEPTEMBER 2003**

## Group 1

1. Second messengers
2. Gentamycin
3. Indirect acting cholinomimetics
4. Cyclooxygenase inhibitors
5. Glucagon

## Group 2

1. Agonists/antagonists/partial agonists
2. Tetracyclines
3. Beta receptor agonists
4. Aspirin
5. Oral hypoglycaemic agents

## Group 3

1. Bioavailability
2. Penicillin
3. Muscarinic receptor blocking drugs
4. Antiplatelet agents
5. Hydrocortisone

**APRIL 2004**

## Group 1

1. Variation in drug responsiveness
2. Cardiac glycosides
3. H2 receptor antagonists
4. MAOI inhibitors
5. Tetracyclines

## Group 2

1. First pass effect and extraction ratio
2. Amiodarone
3. Opioid agonists/antagonists/partial agonists
4. SSRIs
5. Quinolones

**SEPTEMBER 2004**

## Group 1

1. Second messenger
2. Nitrates
3. Midazolam
4. H1 receptor antagonists
5. Local anaesthetics

## Group 2

1. Evaluation of new drugs
2. Loop diuretics
3. Digoxin toxicity
4. Cephalosporins
5. Insulin

## Group 3

1. Pharmacokinetic considerations in the elderly
2. Beta receptor antagonists
3. Lignocaine
4. Quinolones
5. Paracetamol

**APRIL 2005**

## Group 1

1. Efficacy and potency
2. Valproate
3. Betablockers (carvediol)
4. Penicillin - allergy and side effects
5. Nitric acid

## Group 2

1. Variation in drug response
2. Antipsychotic agents - side effects
3. Antiplatelet agents
4. Azithromycin
5. Antiemetics

## Group 3

1. Bioavailability
2. Methanol metabolism and toxicity
3. Lignocaine
4. Sulphonamides
5. COX2 inhibitors

**SEPTEMBER 2005**

## Group 1

1. Absorption of drugs
2. Angiotensin II antagonists
3. Anti seizure drugs
4. Anti migraine agents
5. Glucagon and its role as an antidote

## Group 2

1. Drug metabolism and influence on dosing
2. Sympathomimetic agents
3. Opioid analgesia
4. Mechanisms of antibiotic resistance
5. Lithium

## Group 3

1. Biotransformation
2. Adenosine
3. Benzodiazepines
4. Paracetamol basic pharmacology and toxicity
5. Laxatives

**APRIL 2006**

## Group 1

1. Efficacy and potency
2. Digoxin
3. Salicylate toxicity
4. Inhaled Asthma preventers
5. Vit K - Katzung

## Group 2

1. Volume of distribution
2.  $\beta$  blockers
3. Succinylcholine
4. Warfarin interactions
5. Olanzapine

## Group 3

1. Elimination kinetics
2. Heparins
3. Amiodarone
4. Nitrous oxide
5. Topical anaesthetics

**SEPTEMBER 2006**

## Group 1

1. Dose – Response
2. Calcium Channel Blockers
3. Ondansetron
4. Penicillin
5. St John's Wort

## Group 2

1. Second Messenger
2. Thiazide diuretics
3. Dexamethasone
4. Clopidogrel
5. Benztrapine

## Group 3

1. Drug Half Life
2. Class I Antiarrhythmics – Mechanism of Action
3. Ketamine
4. Trimethoprim
5. Pharmacokinetics in the Elderly

**MARCH 2007**

## Group 1

1. Volume of distribution
2. GTN – Pharmacodynamics of
3. Gentamicin
4. tPA
5. Erythropoietin

## Group 2

1. Efficacy & potency
2. beta Blockers
3. Midazolam
4. Osmotic diuretics (including mannitol)
5. Olanzapine

## Group 3

1. Phase I and Phase II reactions
2. Atropine
3. Prilocaine
4. Chloromycetin
5. Antisepsis : Chlorhexidine

**SEPTEMBER 2007**

## Group 1

1. Routes of drug administration
2. Beta 2 Agonists
3. Paracetamol
4. Agents for Gout
5. Over the counter preparations (toxic potential)

## Group 2

1. First pass effect
2. H1-blockers
3. Morphine
4. Levodopa
5. Penicillamine

## Group 3

1. P450 enzyme system
2. Clonazepam
3. Aspirin
4. Acetazolamide
5. Dantrolene

**APRIL 2008**

## Group 1

1. Second messengers
2. Angiotensin II blockers
3. Low molecular weight heparins
4. Atropine
5. Octreotide

## Group 2

1. Competitive vs irreversible antagonists
2. Loop Diuretics
3. Fluoroquinolones
4. Thiopentone
5. Methylxantines

## Group 3

1. Bioavailability
2. Nitrates
3. beta Lactams
4. Antiemetics
5. Drugs that bind to transporters of biogenic amines - pp 552

**SEPTEMBER 2008**

## Group 1

1. First pass effect
2. Metronidazole
3. Tricyclic Antidepressants
4. Sulfonylureas
5. Laxatives

## Group 2

1. Efficacy and Potency
2. Cephalosporins
3. SSRIs
4. Salbutamol
5. Thioamides

## Group 3

1. P450 Enzyme System
2. Gentamicin
3. Phenytoin
4. Metaclopramide
5. Flecainide

**APRIL 2009**

## Group 1

1. Volume of Distribution
2. Adrenaline
3. Carbamazepine
4. Macrolides
5. Prescribing in the Elderly

## Group 2

1. Drug Half Life
2. Digoxin
3. Chlorpromazine
4. Antibiotics for Staphylococcus infections
5. Prescribing in Pregnancy

## Group 3

1. Zero Order and First Order Kinetics
2. Classes of Anti-hypertensives
3. Ondansetron
4. Acyclovir
5. Prescribing in Children

**SEPTEMBER 2009**

## Group 1

1. Drug biotransformation
2. Classification of drugs in acute asthma
3. Propofol
4. tPA
5. Activated charcoal

## Group 2

1. Dose response
2. Classification of drugs used in diabetes mellitus
3. Ketamine

4. Warfarin
5. Amphetamines

## Group 3

1. Drug clearance
2. Side effects of NSAID
3. Succinylcholine / Suxamethonium
4. Calcium channel blockers
5. Topical anaesthetics

**MARCH 2010**

## Group 1

1. Spare receptors and their significance
2. Antibiotics in urinary sepsis
3. Aspirin
4. Amiodarone
5. Passive immunisation in the ED

## Group 2

1. Antagonists / Agonists
2. Antibiotics in CNS infections
3. Paracetamol toxicity
4. Metoprolol
5. Evaluation of drugs and clinical trials

## Group 3

1. Second messengers
2. Drugs in status epilepticus
3. Morphine
4. Atropine
5. Therapeutic drug monitoring